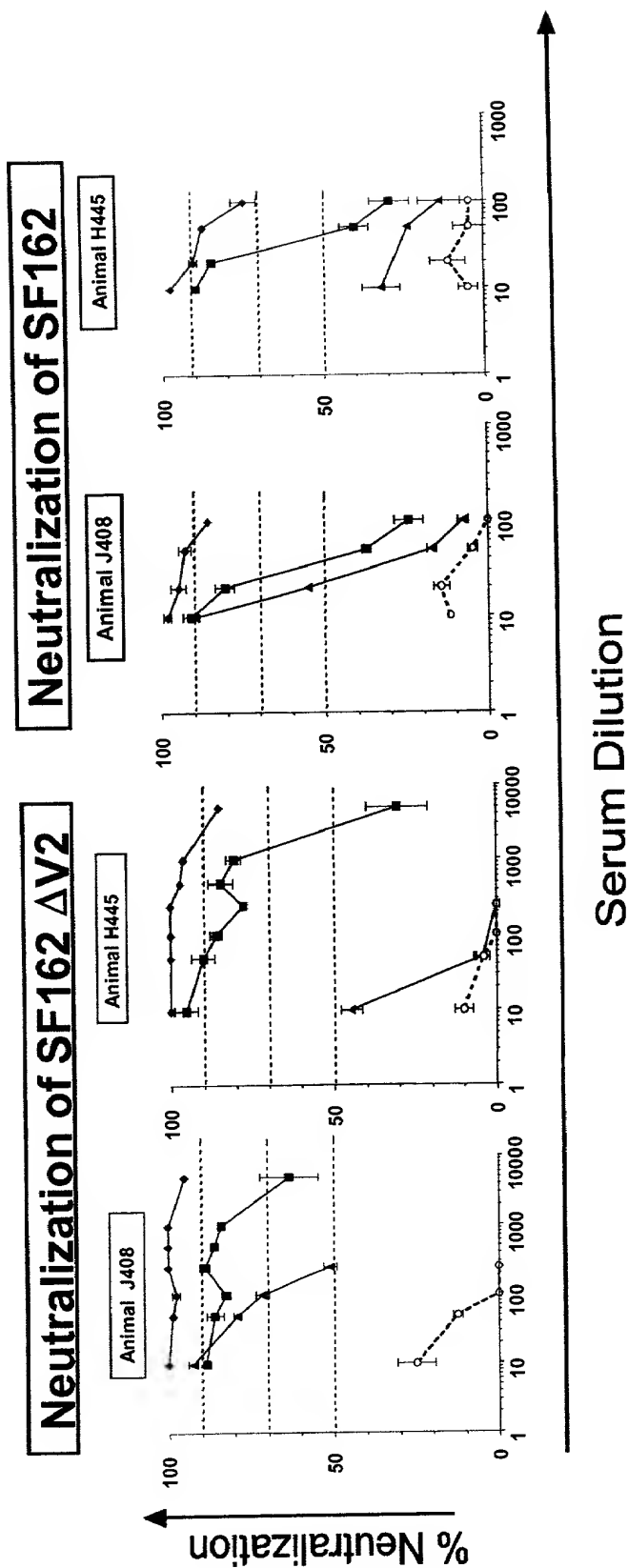
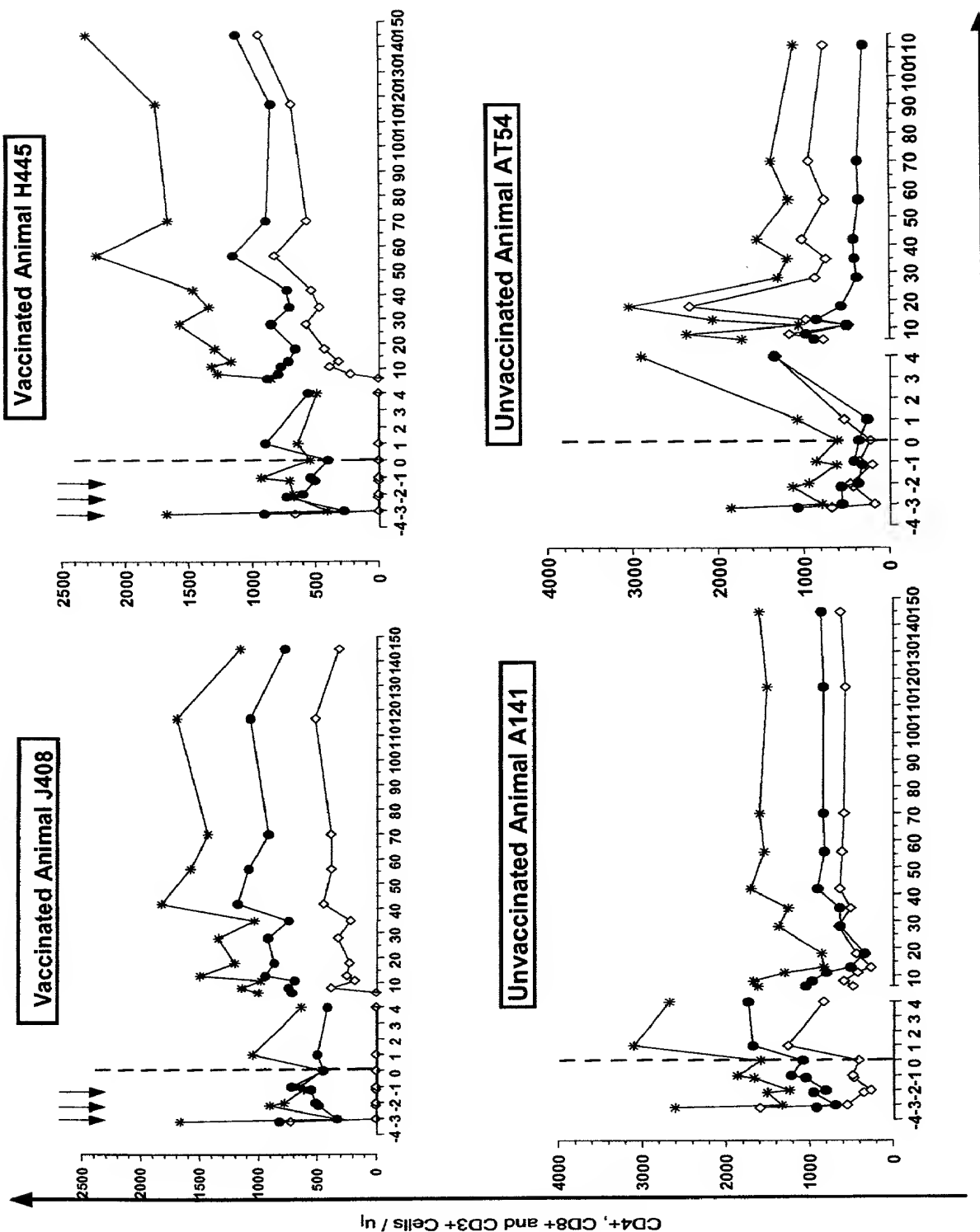


2570-1-001N FIGURE 1



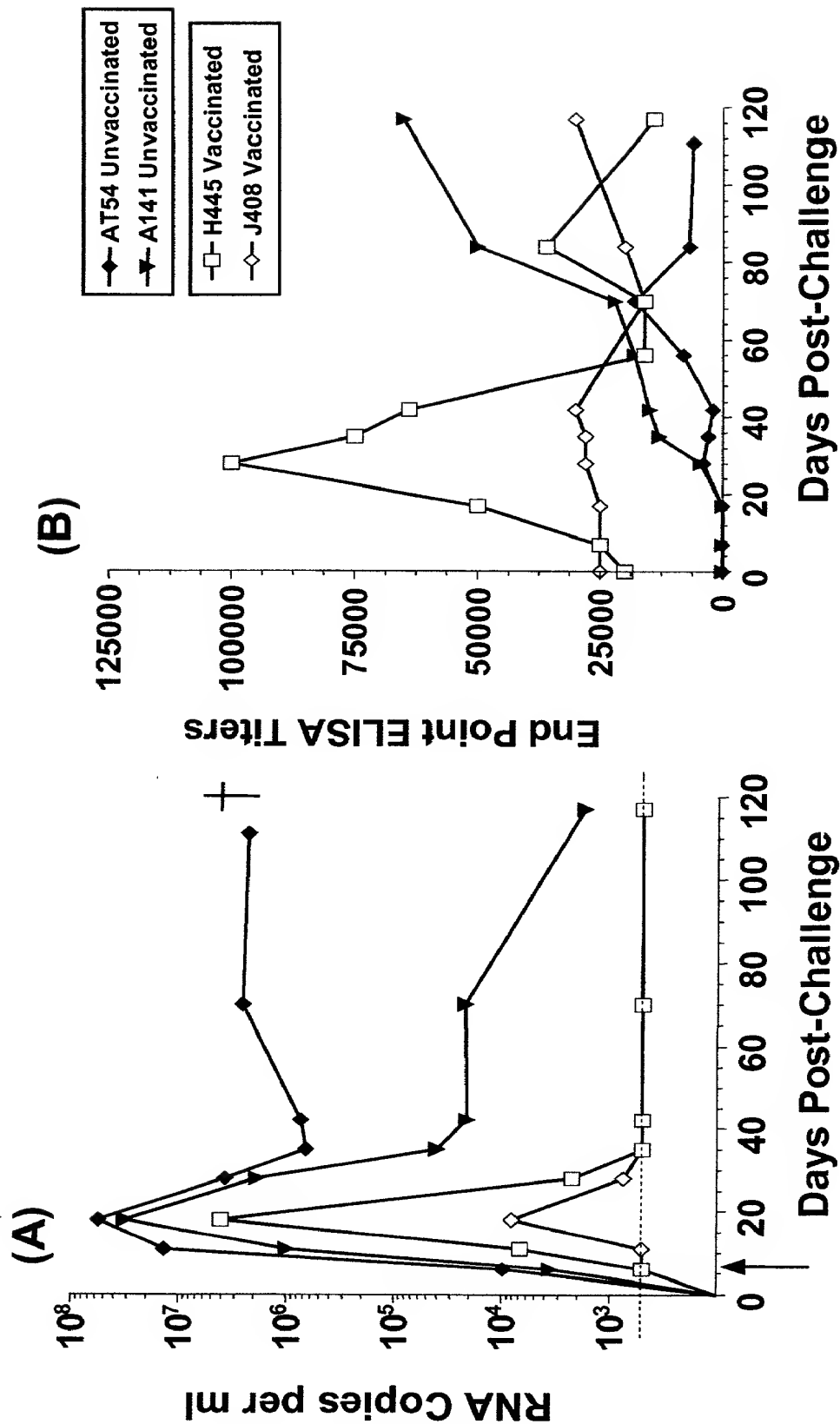
2570-1-001N FIGURE 2

2570-1-001N FIGURE 3

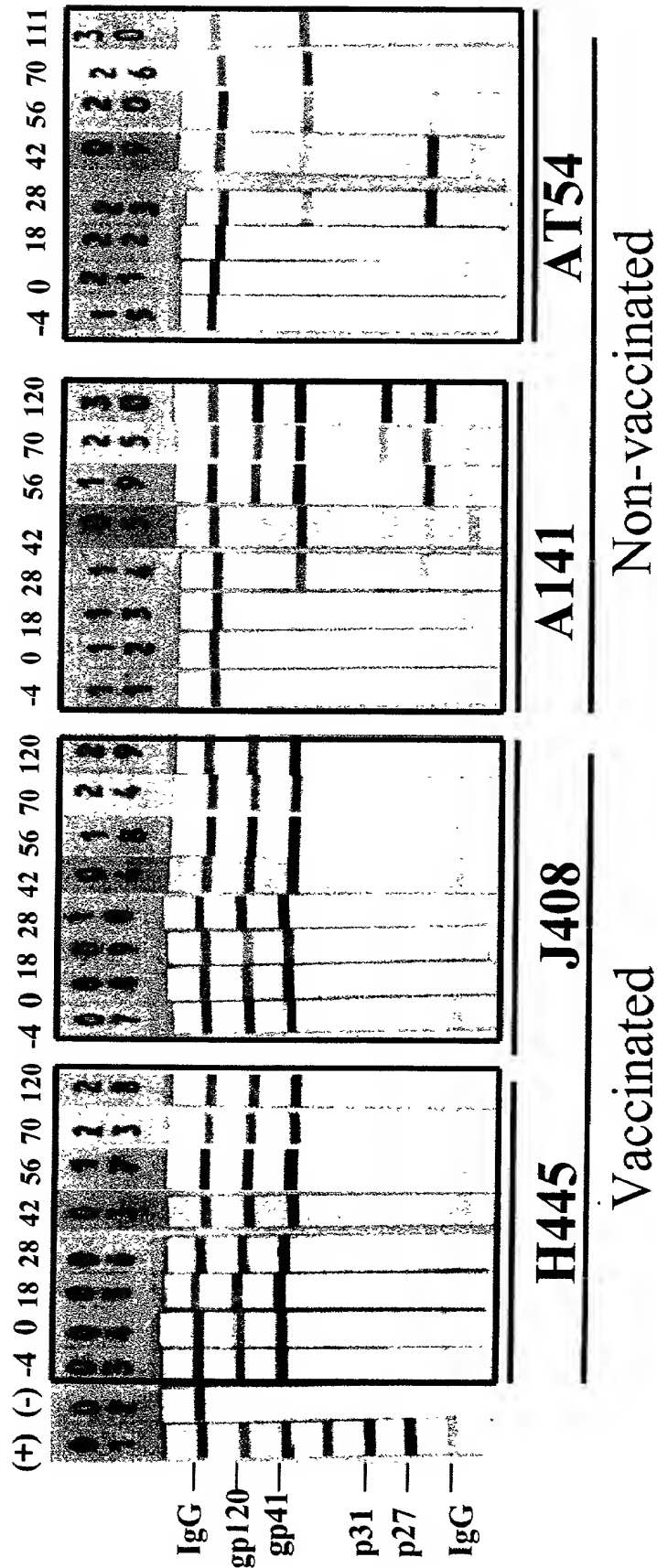


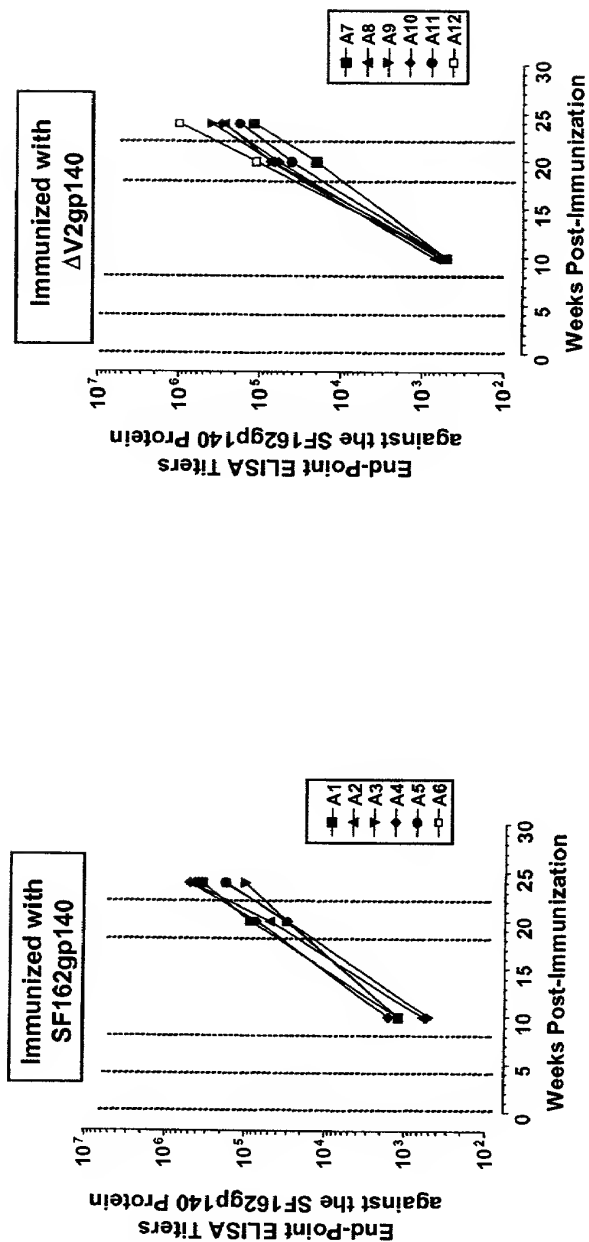
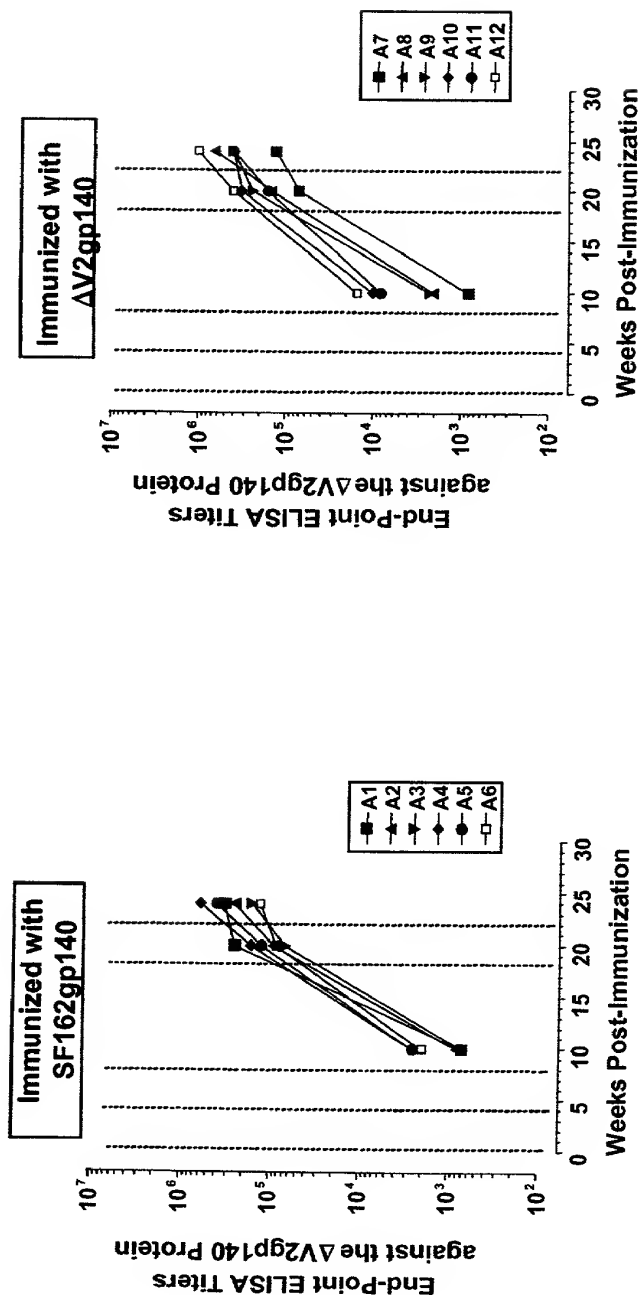
Days Post-Challenge

2570-1-001N FIGURE 4



Seroconversion to SIV-gag/pol and HIV env Antigens





2570-1-001N FIGURE 6

Percent Inhibition of Infection

Animals immunized with $\Delta V2gp140$

3d Immunization

5th Immunization

Legend for 3d and 5th Immunization:

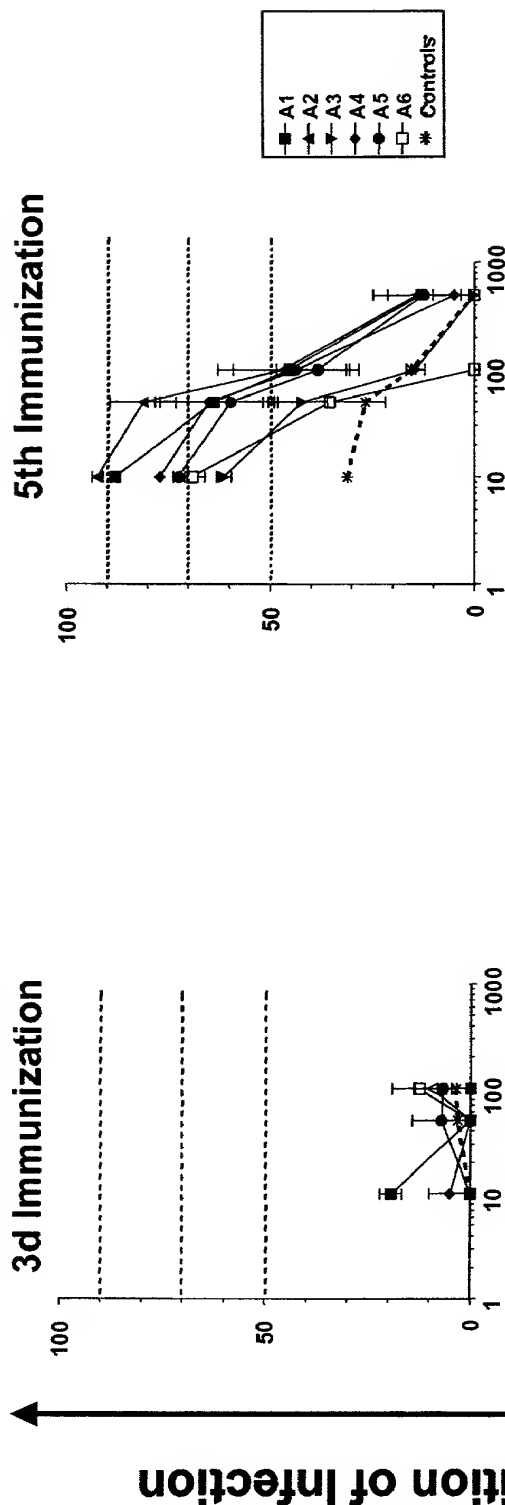
- A1 (solid line, square)
- A2 (solid line, triangle up)
- A3 (solid line, triangle down)
- A4 (solid line, diamond)
- A5 (solid line, circle)
- A6 (solid line, square open)
- Controls (dashed line, asterisk)

Legend for 3d and 5th Immunization (A7-A12):

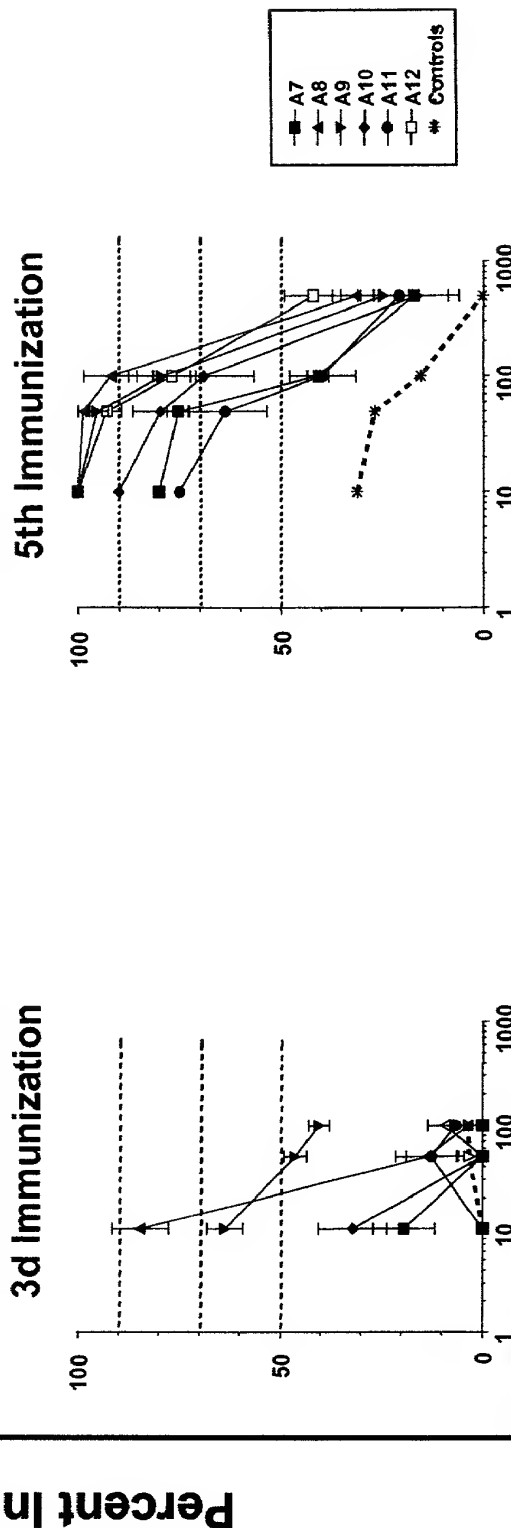
- A7 (solid line, square)
- A8 (solid line, triangle up)
- A9 (solid line, triangle down)
- A10 (solid line, diamond)
- A11 (solid line, circle)
- A12 (solid line, square open)
- Controls (dashed line, asterisk)

Serum Dilution

5th Immunization



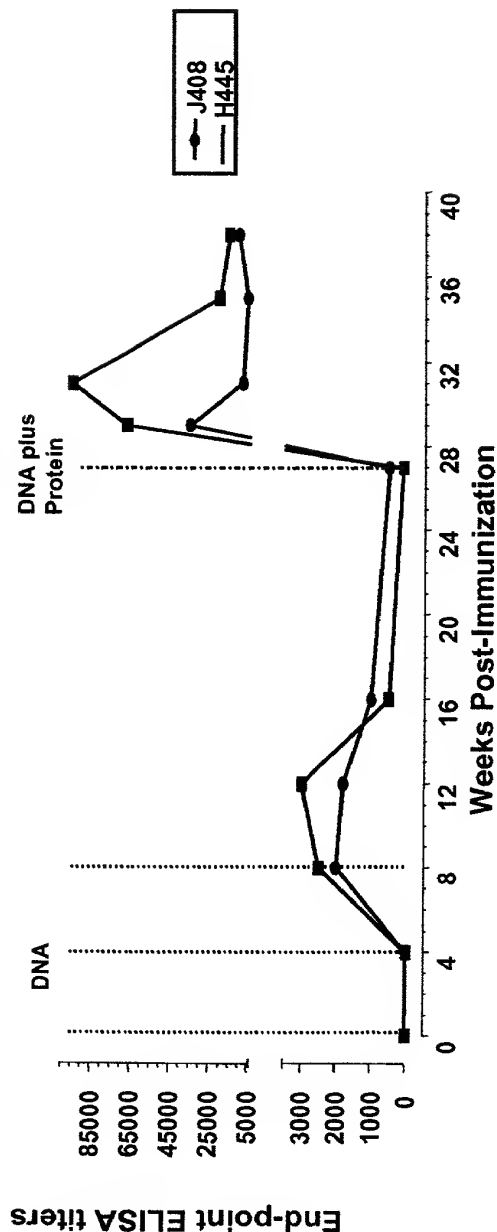
5th Immunization



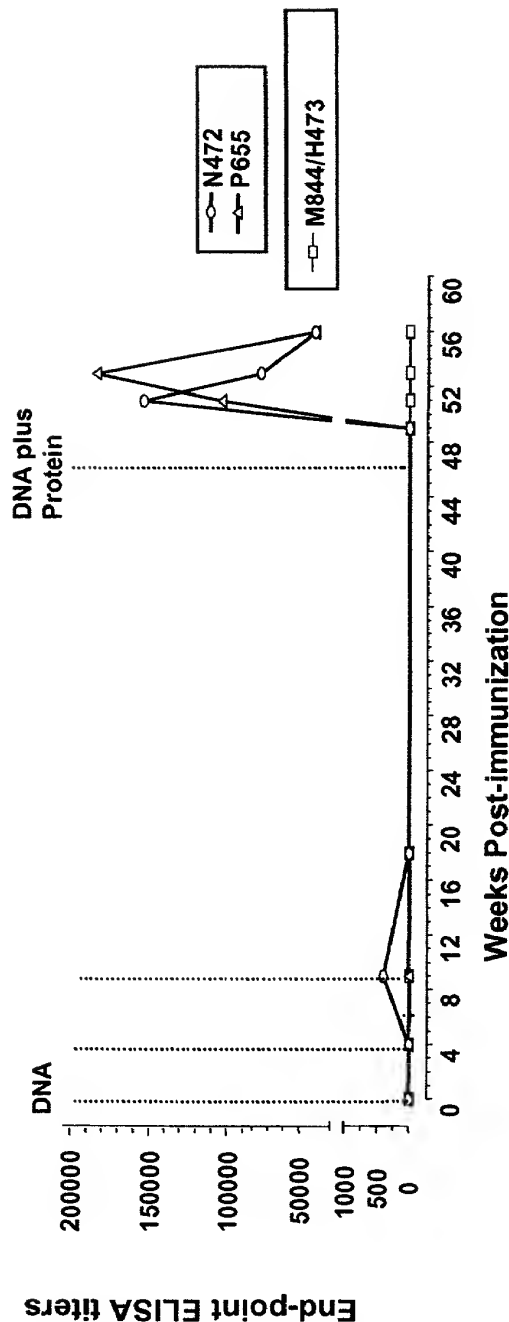
Serum Dilution

2570-1-001N FIGURE 8

Immunization with the modified Δ V2gp140 immunogen

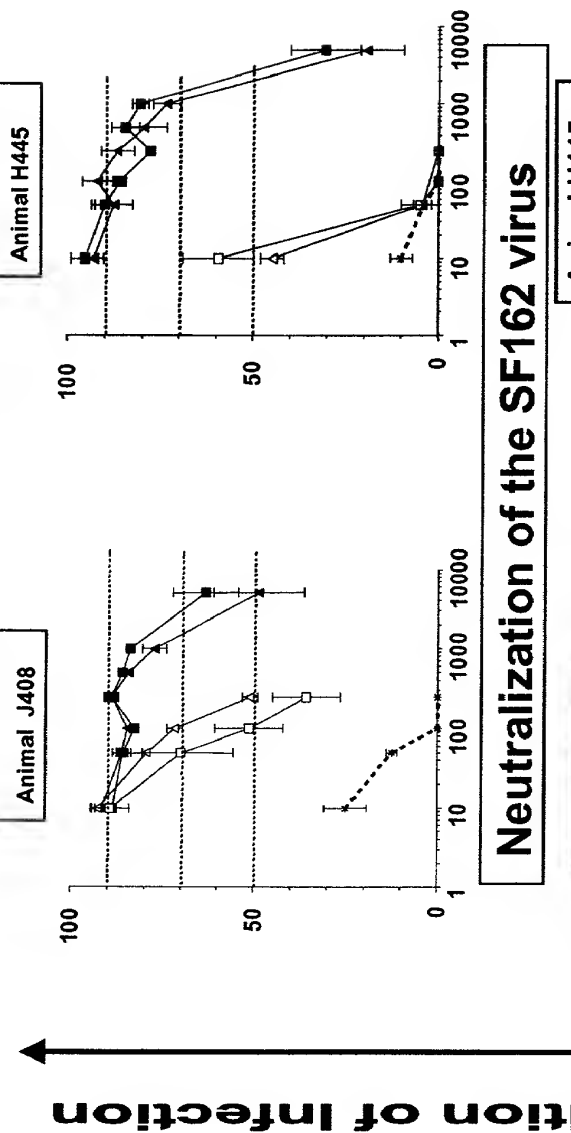


Immunization with the unmodified SF162gp140 immunogen

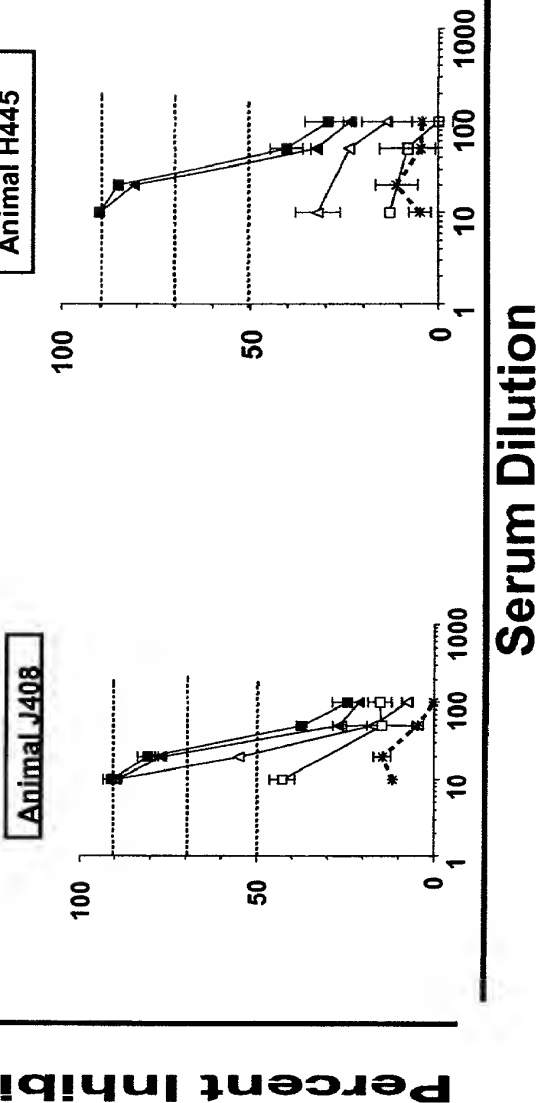


2570-1-001N FIGURE 9A

Neutralization of the SF162 Δ V2 virus



Neutralization of the SF162 virus

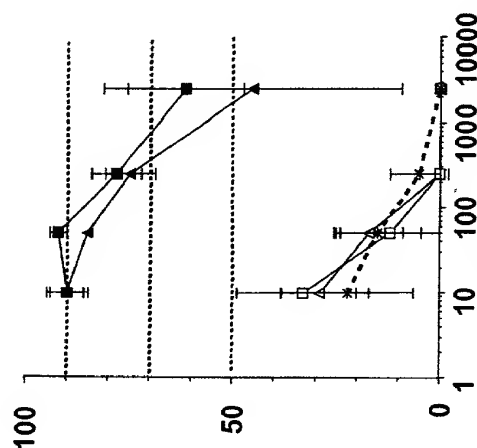


Serum Dilution

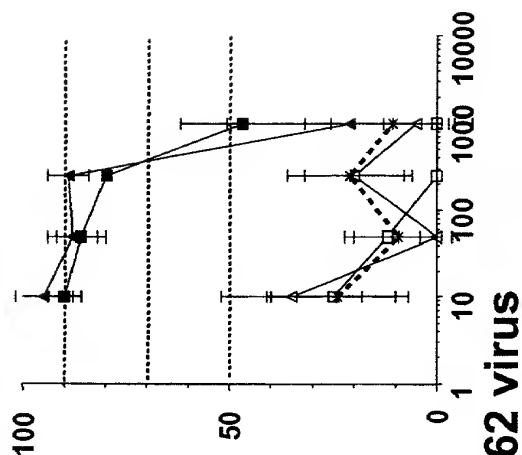
2570-1-001N FIGURE 9B

Neutralization of the SF162ΔV2 virus

Animal N472

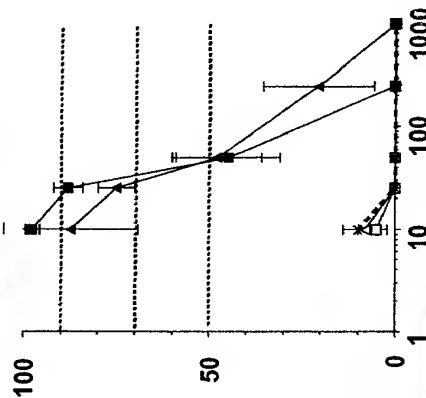


Animal P655

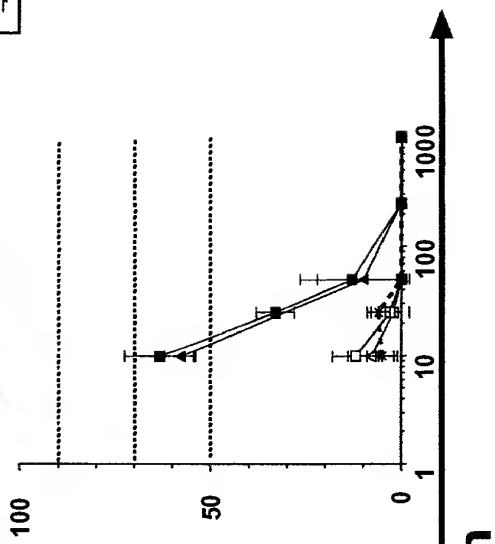


Neutralization of the SF162 virus

Animal N472

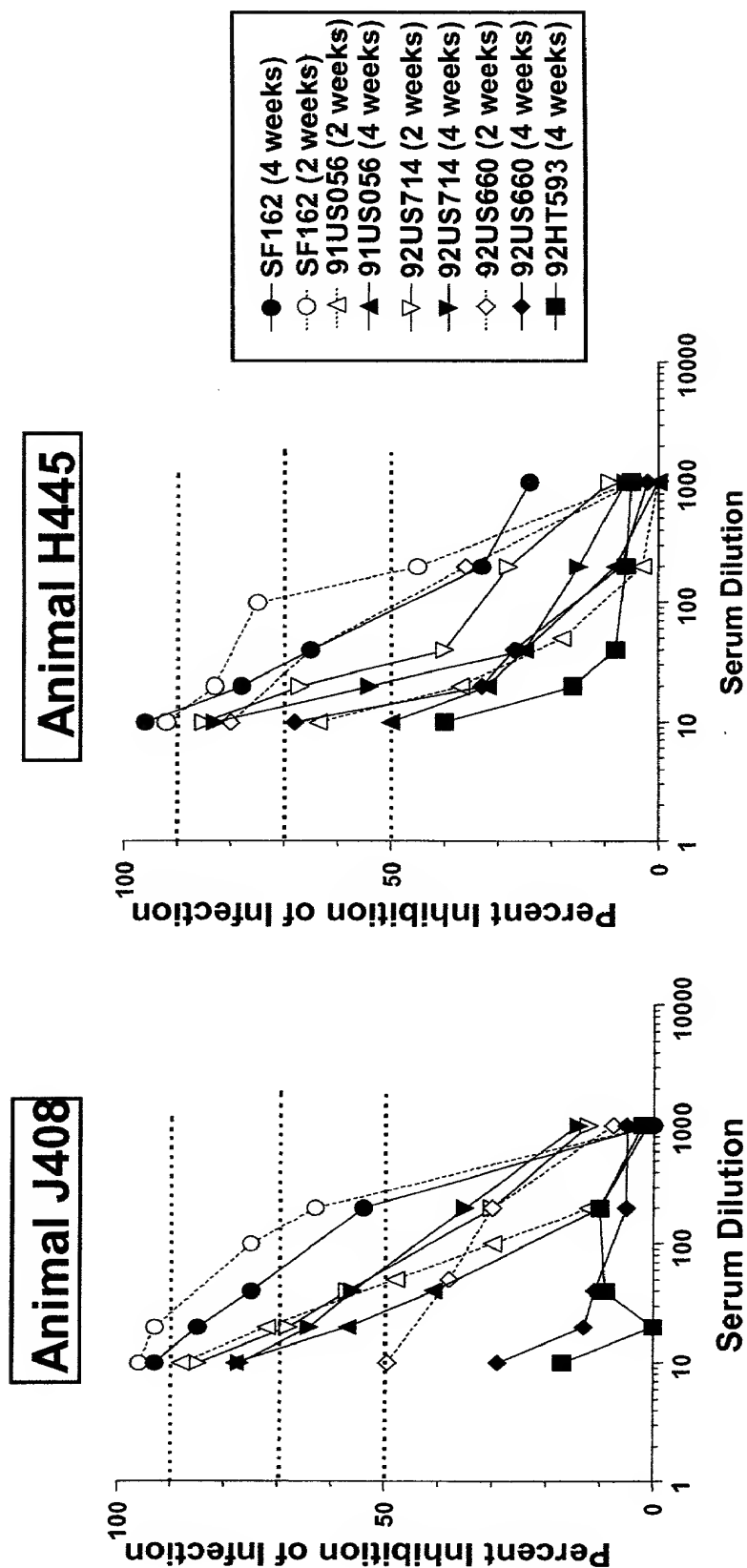


Animal P655

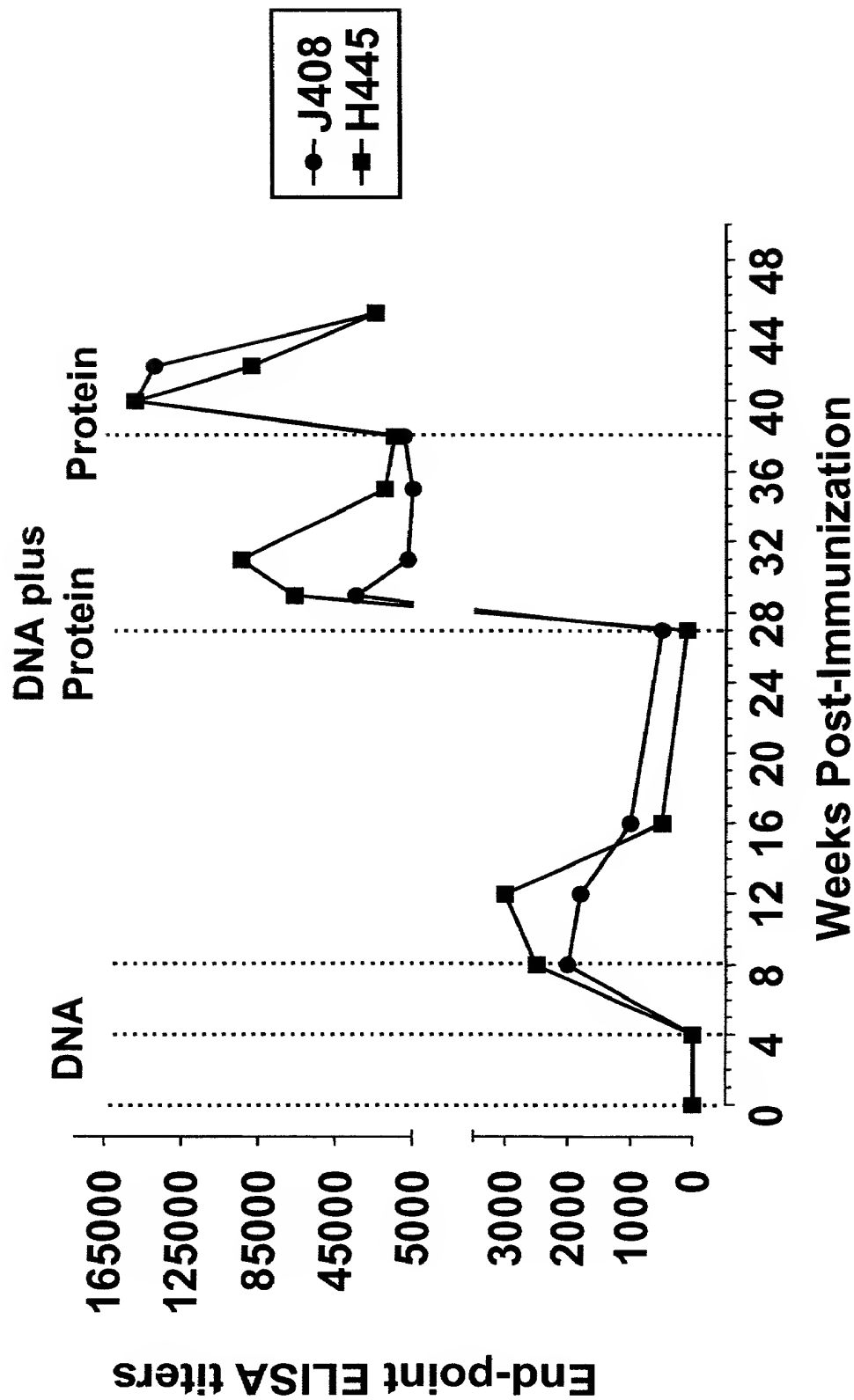


- * Pre-bleeds
- 2nd DNA
- △ 3d DNA
- ◆ 2 weeks post boost
- × 4 weeks post boost

2570-1-001N FIGURE 10

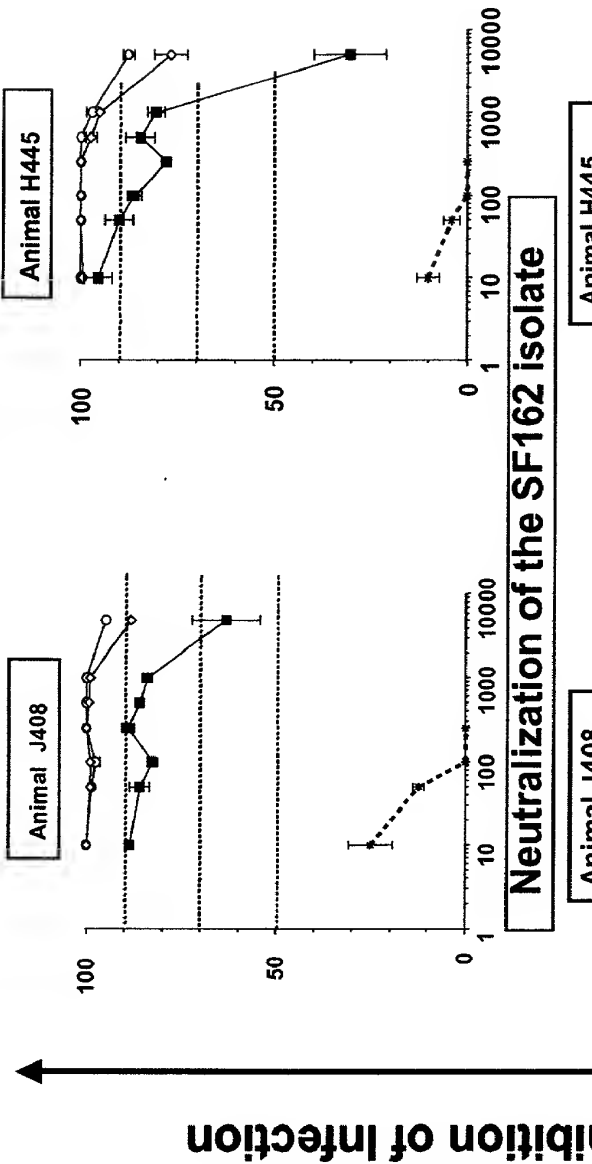


2570-1-001N FIGURE 11A

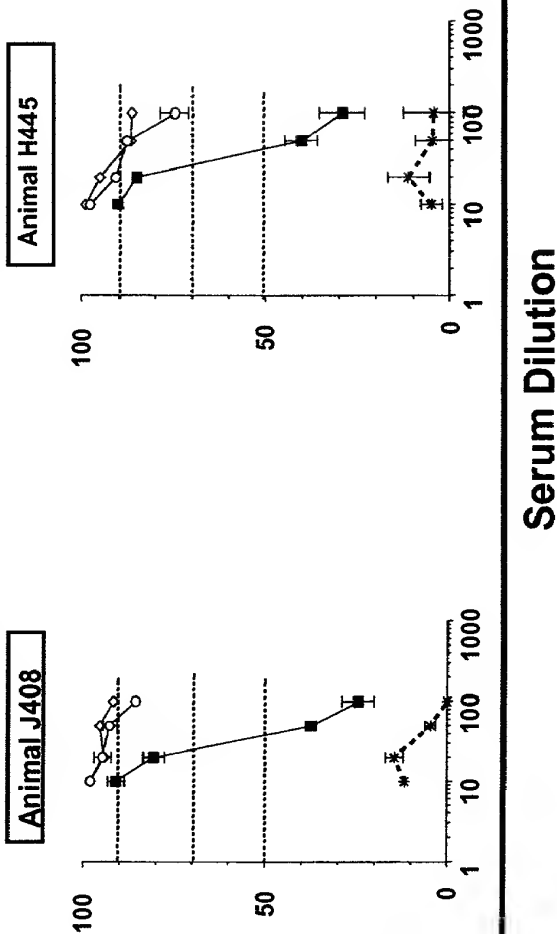


2570-1-001N FIGURE 11B

Neutralization of the SF162 Δ V2 isolate



Neutralization of the SF162 isolate

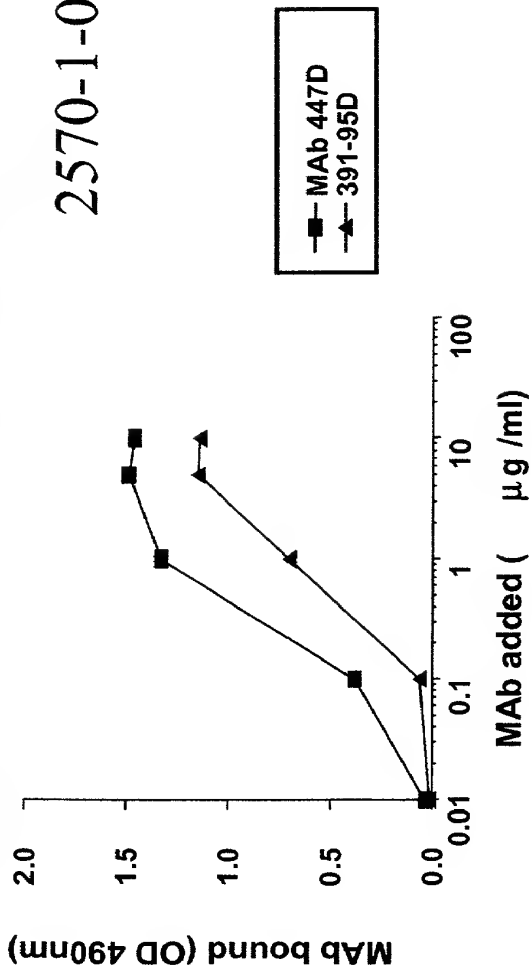


Percent Inhibition of Infection

Serum Dilution

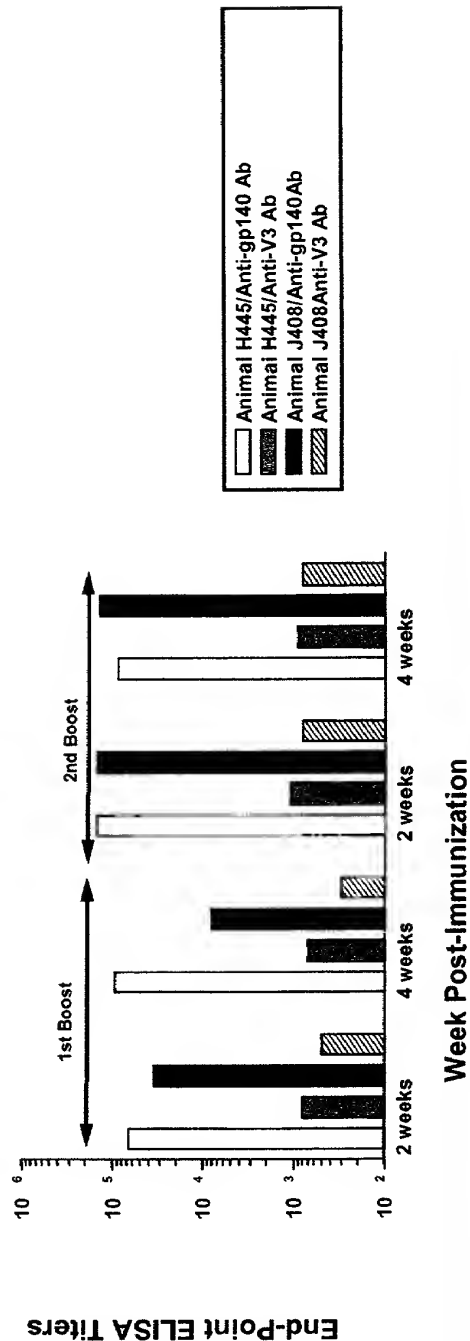
* Pre-bleeds
 ■ 2 weeks post 1st boost
 ○ 2 weeks post 2nd boost
 ◇ 5 weeks post 2nd boost

(A) Binding of Anti-V3 loop MAbs to the SF162 Δ V2-derived V3 loop peptide



2570-1-001N FIGURE 12A-B

(B) Binding of macaque serum antibodies to the Δ V2gp140 protein and the corresponding V3 loop peptide



Neutralization of clade A, E and D HIV-1 viruses from sera collected from animal H445

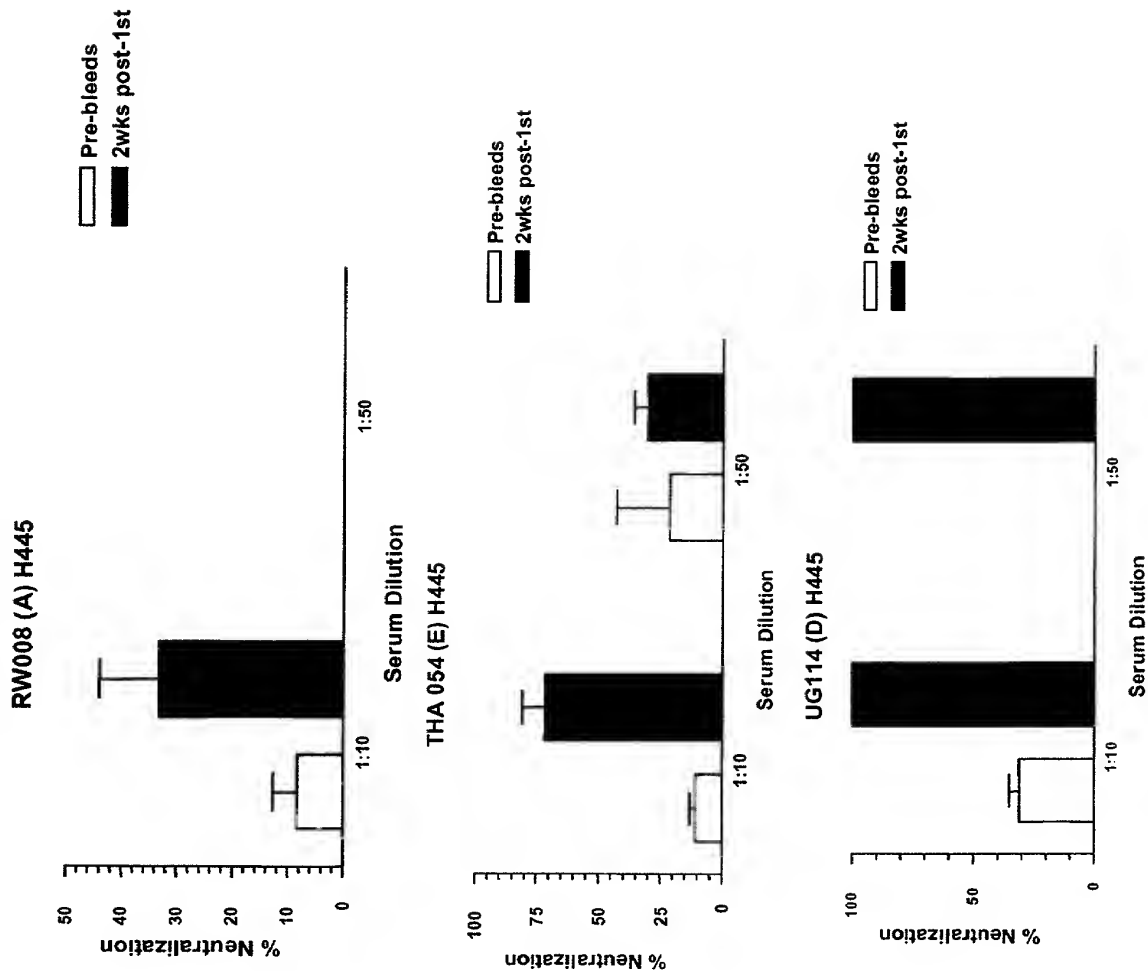


FIGURE 13B

Neutralization of clade A, E and D HIV-1 isolates
from sera collected from animal J408

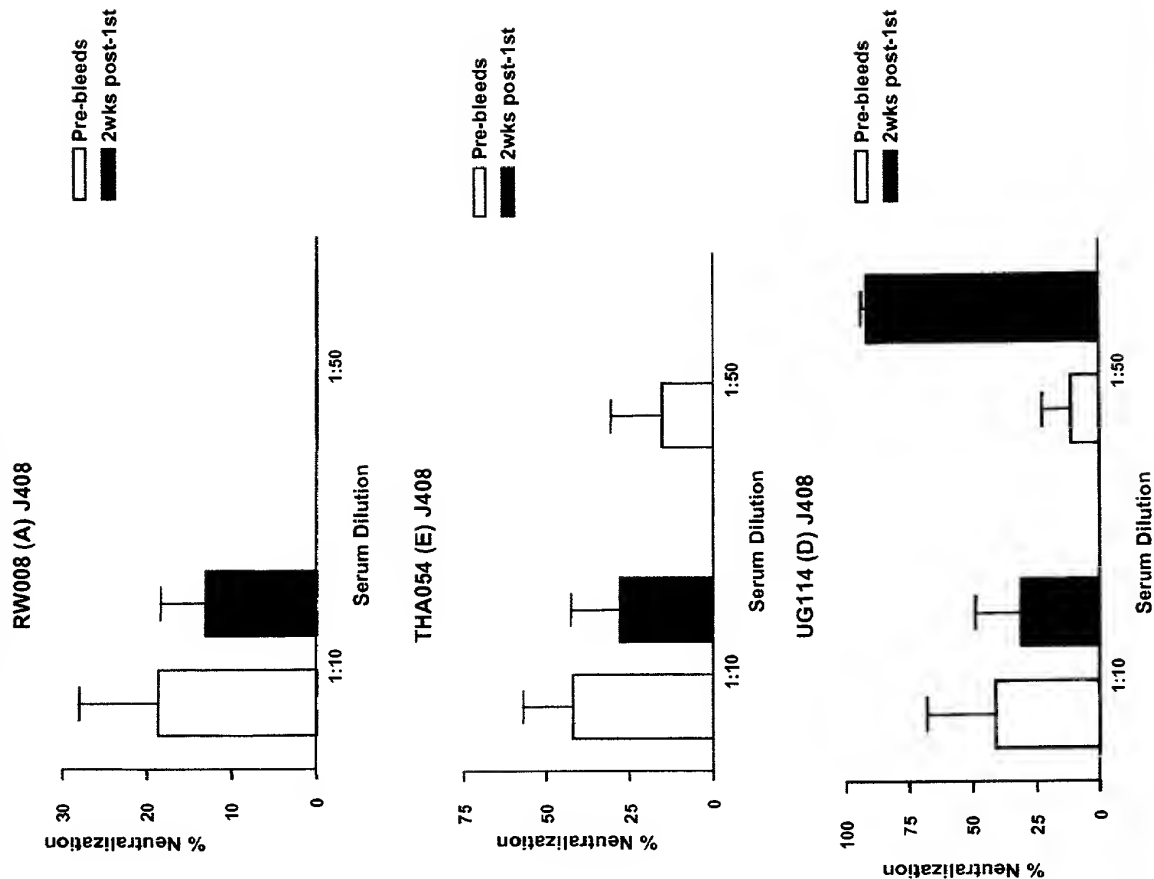


FIGURE 14

atgagagtg aaggggatca ggaagaatta tcagcacttg tggagagggg gcaccttgct
 ccttgggatg ttgatgatct gtagtgctgt agaaaaattg tgggtcacag tctattatgg
 ggtacctgtg tggaaagaag caaccaccac tctattttgt gcatcagatg ctaaaagccta
 tgacacagag gtacataatg tctggggccac acatgcctgt gtaccacacg accctaacc
 acaagaaaata gtattggaaa atgtgacaga aaattttaac atgtggaaaa ataacatggt
 agaacagatg catgaggata taatcagttt atgggatcaa agtctaaagc catgtgtataa
 gttaaaccca ctctgtgta ctctacattg cactaatttg aagaatgcta ctaataccaa
 gagttagtaat tggaaagaga tggacagagg agaaataaaa aattgctctt tcaaggtc

-GGA-GCT-GGA-

aa attgataaat tgtaacacct cagtcattac
 acaggcctgt ccaaaggtat ctttgaacc aattcccata cattattgtg cccggctggg
 ttttgcgatt cttaaagtga atgataagaa gttcaatgga tcaggaccat gtacaaatgt
 cagcacagta caatgtacac atggaattag gccagtagtg tcaactcaat tgctgttaaa
 tggcagtccta gcagaagaag gggtagtaat tagatctgaa aatttcacag acaatgctaa
 aactataata gtacagctga aggaatctgt agaaatlaat tgtacaagac ctaacaataa
 tacaagaaaa agtataacta taggaccggg gagagcattt tatgcaacag gagacataat
 aggagatata agacaagcac attgtaacat tagtggagaa aaatggaata acactttaaa
 acagatagtt acaaaattac aagcacaatt tgggaataaa acaatagctt ttaagcaatc
 ctgaggagggg gaccagaaaa ttgtaatgca cagttttaat tgtggagggg aatttttcta
 ctgtaattca acacagcttt ttaatagtac ttggaataat actatagggc caaataaacac
 taatggaaact atcacactcc catgcagaat aaaacaaaatt ataaacaggt ggcagggaagt
 aggaaaagca atgtatgccc ctcccatcag aggacaaaatt agatgctcat caaatattac
 aggactgcta ttaacaagag atggtggtaa agagatcagt aacaccaccg agatcttcag
 acctggaggt ggagatatga gggacaattg gagaagtga ttaataaat ataaagtagt
 aaaaattgag ccattaggag tagcaccac caaggcaaa agagagtagt tgcagagaga
 aaaaagagca gtgacgctag gagctatgtt ccttgggttc ttgggagcag caggaagcac
 tatggggcga cggtcactga cgctgacggt acaggccaga caattattgt ctggtatagt
 gcaacagcag aacaatttgc tgagagctat tgaggcgcaa cagcatctgt tgaactcac
 agtctggggc atcaagcagc tccaggcaag agtcttggtt gtggaaagat acctaaagga
 tcaacagctc ctagggtttt ggggttgctc tggaaaactc atttgcacca ctgctgtgcc
 ttggaatgct agttggagta ataaatctct ggatcagatt tggataaaca tgacctggat
 ggagtgggag agagaaaattg acaattacac aaacttaata tacaccttaa ttgaagaatc
 gcagaaccaa caagaaaaaga atgaacaaga attattagaa ttggataagt gggcaagttt
 gtggaattgg ttgacatat caaaatggct gtggtatata aaa

2570-1-001N FIGURE 15

agtgctgt agaaaaattg tgggtcacag tctattatgg
 ggtacctgtg tggaaagaag caaccaccac tctattttgt gcatcagatg ctaaagccta
 tgacacagag gtacataatg tctggggcac acatgcctgt gtaccacacag accctaacc
 acaagaaata gtattggaaa atgtgacaga aaattttaac atgtggaaaa ataacatggt
 agaacagatg catgaggata taatcagttt atgggatcaa agtctaaagc catgtgtaaa
 gttaacccca ctctgtgtta ctctacattg cactaatttg aagaattgcta ctaataccaa
 gagttagtaat tggaaagaga tggacagagg agaaaataaaa aattgtcttt tcaaggtc
 -GGA-GCT-GGA-
 aa attgataaat tgtaacacct cagtcattac
 acaggcctgt ccaaagggtat cctttgaacc aattcccata cattattgtg cccgggctgg
 ttttgcgatt ctaaagtgtg atgataagaa gttcaatgga tcaggaccat gtacaaatgt
 cagcacagta caatgtacac atggaattag gccagtagtg tcaactcaat tgctgttaaa
 tggcagtcta gcagaagaag gggtagtaat tagatctgaa aatttcacag acaatgctaa
 aactataata gtacagctga agaatctgt agaaattaat tgtacaagac ctaacaataa
 tacaagaaaa agtataacta taggaccggg gagagcattt tatgcaacag gagacataat
 aggagatata agacaagcac attgtaacat tagtggagaa aaatggaata acactttaaa
 acagatagtt acaaaattac aagcaccaatt tgggaataaa acaatagtct ttaagcaatc
 ctgaggaggg gaccagagaa ttgtaatgca cagttttaat tgtggagggg aatttttcta
 ctgtaattca acacagcttt ttaatagtac ttggaataat actatagggc caaataaacac
 taatggaaat atcacactcc catgcagaat aaacaaaatt ataacagggt ggcaggaaagt
 aggaaaagca atgtatgccc ctccatcag aggacaaaatt agatgctcat caaatattac
 aggactgcta ttaacaagag atggtggtaa agagatcagt aacaccaccg agatcttcag
 acctggaggt ggagatatga gggacaattg gagaagtga ttaataaaat ataaagtagt
 aaaaattgag ccattaggag tagcacccac caaggcaag agaagagtgg tgcagagaga
 aaaaagagca gtgacgctag gagctatgtt ccttgggttc ttgggagcag caggaaagcac
 tatgggcgca cggtcactga cgctgacggt acaggccaga caattattgt ctggtatagt
 gcaacagcag aacaatttgc tgagagctat tgaggcgcaa cagcatctgt tgcaactcac
 agtctggggc atcaagcagc tccaggcaag agtcctggct gtggaaagat acctaaagga
 tcaacagctc ctagggattt ggggttgctc tggaaaactc atttgacca ctgctgtgcc
 ttgggaatgct agttggagta ataaatctct ggatcagatt tggaaataaca tgacctggat
 ggagtgggag agagaaaattg acaattacac aaacttaata tacaccttaa ttgaagaatc
 gcagaaccaa caagaaaaaga atgaacaaga attattagaa ttggataagt gggcaagttt
 gtggaaattgg tttgacatat caaatggct gtggtatata aaa

2570-1-001N FIGURE 16

Amino acid sequence of SF162AV2 gp140

MRVKGIRKNYQHLWRGGTLLGLMLICSAVEKLWVTVYYG
 VPVWKEATTLFCASDAKAYDTEVHNWVWATHACVPTDPNPQ
 EIVLENVTENFNMWKNMVEQMHEDIISLWDQSLKPCVKLT
 PLCVTLHCTNLKNA~~T~~NTKSSNWKEMDRGEIKNC~~S~~FKV-GAG-
 KLINCNTSVITQACPKVSFEPIPIHYCAPAGFAILKCNDKKFN
 GSGPCTNVSTVQCTHGIRPVVSTQLLNLGSLAEEGVVIRSEN~~F~~
 TDNAKTIIVQLKESVEINCTRPNNNTRK~~S~~ITIGPGRAFYATGDI
 IGD~~I~~RQAHCNISGEKW~~N~~NTLKQIVTKLQAQFG~~N~~KTIVFKQSS
 GGDPEIVMHSFNCGGEFFYC~~N~~STQLFNSTW~~N~~NTIGP~~N~~NTNG
 TITLPCRIKQIINRWQEVGKAMYAPPIRGQIRC~~S~~SNITGLLLTR
 DGGKEIS~~N~~TTEIFRPGGDMRDNWRSELYKYKVVKIEPLGV
 APTKAKRRVVQREKRAVTLGAMFLGFLGAAGSTMGARSL
 TLTVQARQLLSGIVQQNNLLRAIEAQQHLLQLTVWGIKLQ
 ARVLAVERYLKDQQLLGIWGC~~S~~GKLICTTAVPW~~N~~ASWSNK
 SLDQIWNNMTWMEWEREIDNYTNLIYTLIE~~S~~QNQQQEKNE
 QELLELDKWASLWNWFDISKWLWYIK

2570-1-001N FIGURE 17

Amino acid sequence of SF162AV2 gp140 less 27 amino acid N-terminal sequence

SAVEKLWVTVYYG
 VPVWKEATTLFCASDAKAYDTEVHNVWATHACVPTDPNPQ
 EIVLENVTENFNMWKNMVEQMHEDIISLWDQSLKPCVKLT
 PLCVTLHCTNLKNA~~T~~NTKSSNWKEMDRGEIKNC~~S~~FKV-GAG-
 KLINCNTSVITQACPKVSFEPPIHYCAPAGFAILKCNDKKFN
 GSGPCTNVSTVQCTHGIRPVVSTQLLLNGSLAEEGVVIRSENF
 TDNAKTHIVQLKESVEIN~~C~~TRPNN~~N~~TRK~~S~~ITIGPGRAFYATGDI
 IGD~~I~~RQAHCNISGEKWN~~N~~TLKQIVTKLQAQFGNKTIVFKQSS
 GGDPEIVMHSFNCGGEFFYC~~N~~STQLFNSTWNNTIGPNN~~T~~NG
 TTTLPCR~~I~~KQIINRWQEVGKAMYAPP~~I~~RGGQIRCSSNITGLLLTR
 DGGKEISNTTEIFRPGGDMRDNWRSELYKYKVVKIEPLGV
 APTKAKRRVVQREKRAVTLGAMFLGFLGAAAGSTMGARSL
 TLT~~V~~QARQLLSGIVQQQNNLLRAIEAQQHLLQLTVWGIKLQ
 ARVLAVERYLKDQQLLGWGC~~S~~GKLICTTAVPWNASWSNK
 SLDQIWN~~N~~MTWMEWEREID~~N~~YTNLIYTLIEESQNQ~~Q~~EKNE
 QELLELDKWASLWNWFDISKWLWYIK